

total cost of clearing the entire band.^{29/} Moreover, these costs could be substantially reduced if the FCC allowed the existing microwave users in this band to relocate on a co-primary basis to another portion of the 2 GHz band.^{30/}

API suggests a plan whereby the existing microwave users in the 1910-1930 MHz band would have a one-year transition period in which to relicense affected paths in other frequency bands. Under API's proposal, those microwave licensees requesting relicensing in other microwave bands would be entitled to reimbursement of their relocation costs from an escrow fund established by unlicensed PCS manufacturers. Microwave licensees in the 1910-1930 MHz band that failed to request relicensing during the one-year transition period would have their licenses revert to secondary status.^{31/}

^{29/} FCC licensing records indicate there are fewer than 500 frequency paths licensed in the 1910-1930 MHz band. Using the FCC staff's low-end estimate of \$125,000 per station, the total cost to unlicensed PCS vendors to clear the 1910-1930 MHz band would be about \$63 million.

^{30/} In its R&O/TNPRM in ET Docket No. 92-9, the FCC specifically suggested as part of its transition plan that existing microwave users of the 2 GHz band allocated for unlicensed PCS be able to relocate to other portions of the 2 GHz band on a "priority" basis.

^{31/} API, pp. 16-19.

API's plan appears to be based on an assumption that unlicensed PCS will only impact microwave stations in the 1910-1930 MHz band licensed within ten miles of the center of the top 50 MSAs.^{32/} While API's plan might be workable if deployment of unlicensed PCS were limited to urban areas, as discussed above, the consensus of the commenters is that unlicensed PCS will not be confined to specified or predictable locations, but will instead be a nationwide phenomenon.^{33/} Consequently, the entire 1910-1930 MHz band must be cleared on a nationwide basis. It is unrealistic to imagine that all of the existing microwave users in the 1910-1930 MHz band could complete the logistics of relicensing, siting, engineering and building replacement microwave facilities within a one-year time period.

Identifying the stations in the 1910-1930 MHz band that must be relocated is an easy task since the fewer than 500 licensed stations in this band are a matter of public record. The greater issue is determining who will pay the cost of microwave relocation. Until this issue is resolved it is premature to discuss any mandatory date by which microwave licensees should vacate the 1910-1930 MHz band. Moreover,

^{32/} API, p. 18.

^{33/} UTC would suspect, for example, that some unlicensed radio products might be developed that would have applications even in the most remote locations.

API's suggestion that existing microwave users choosing not to relicense within a one-year period revert to secondary status is inconsistent with the "transition framework" that the Commission has already adopted in ET Docket No. 92-9.^{34/}

Finally, in relocating existing microwave systems from the 1910-1930 MHz band, the Commission must adopt rules ensuring the operational integrity of the entire system. Thus, if the microwave station in the 1910-1930 MHz band is one end of a paired system, with the other end licensed in another part of the 2 GHz band, the Commission's relocation/transition rules must protect the integrity of that entire system, not just its component parts.

Similarly, the Commission's rules must consider the adverse impact that unlicensed PCS operations might have on microwave operations in the bands immediately adjacent to the 1910-1930 MHz band. Southwestern Bell Corporation (SBC) indicates that fixed microwave receivers licensed in the 1900-1910 MHz and 1930-1940 MHz bands have 30 dB selectivity bandwidths of up to 18 MHz and, as a consequence, will be susceptible to interference from unlicensed devices operating

^{34/} API's proposal does not indicate whether state/local government licensees in the 1910-1930 MHz band would be subject to expedited involuntary relocation procedures. However, under the policies already adopted in ET Docket No. 92-9, state/local government licensees could not be forced to relocate or to take automatic secondary status.

in the 1910-1930 MHz band.^{35/} Thus, there must be a mechanism to ensure that adjacent channel microwave systems are either protected from interference or included in the relocation plan for unlicensed PCS.

III. THE FCC MUST ESTABLISH A BLOCK OF SPECTRUM FOR NON-COMMERCIAL USE

UTC reiterates its request for a non-commercial PCS allocation. As almost all of the comments filed in this proceeding illustrate, potential PCS providers contemplate the provision of a commercial type of personal communications service, to accommodate the more general communications needs of the public. Particularly in the early years of the provision of PCS service, it is expected that PCS providers will attempt to attract the largest number of customers by providing "lowest common denominator" PCS services -- basic PCS services which have applications for the most users.

While this course of action is a logical method by which to achieve a firm position within a competitive personal communications marketplace composed not only of PCS providers, but also cellular and enhanced SMR systems, it will not foster the development of unique PCS applications for internal use by large, private users of spectrum or the

^{35/} SBC, p. 31.

development of innovative technological applications of PCS services for general users. A non-commercial allocation will ensure there is sufficient, guaranteed spectrum for the development of innovative and specialized PCS applications by private spectrum users. Once refined, the more innovative and complex PCS applications developed by non-commercial users would be adaptable for more general, large-scale distribution to the public.

Utilities and other internal users of spectrum require the availability of separate non-commercial spectrum. As UTC noted in its comments, utilities use telecommunications systems to transmit critical information necessary to control the safe and efficient delivery of public utility services.^{36/} The utility industry has numerous specific uses for sophisticated PCS applications of land mobile and mobile data systems to augment their crucial communications systems. Commercial systems are reluctant to develop the system configurations and special requirements needed by utilities because these add costs.^{37/} Control of the facilities by utilities is required to ensure the highest degree of reliability of the communications. As a result,

^{36/} UTC, p. 24.

^{37/} City Utilities Of Springfield, Missouri (City Utilities), p. 8.

obtaining service from commercial service providers is not an acceptable option for utilities.^{38/}

Utilities are also uniquely positioned to incorporate PCS technologies to better manage the efficiency of energy use and transmission.^{39/} However, as City Utilities notes, these systems ultimately require a communications link with each utility customer, which is currently cost prohibitive.^{40/} PCS would provide an opportunity for wireless links to monitor and control energy distribution and problems in the home.^{41/}

Congress recently recognized the need for spectrum to accommodate utility use of emerging technologies with its

^{38/} As City Utilities explains, additional issues complicate the question of utilities obtaining service from common carriers. The City Utilities cite the example of a communications interruption which results in the failure of a portion of an electric grid, causing significant damage to transformers and other equipment, and power outages over a significant area, noting that it would be difficult to determine who would be responsible for the damage. City Utilities, pp. 8-9.

^{39/} As City Utilities states, among the technical advances utilities may use with PCS technology are the ability to "monitor power/volume at the customer level, read meters, alarm critical performance parameters (gas leaks, water pressure and transformer performance), manage power/volume loads, including the ability to shed loads at peak usage periods, and to monitor critical environmental and safety functions." City Utilities, pp. 4-5.

^{40/} City Utilities, p. 5.

^{41/} City Utilities, p. 6.

passage of the Telephone Disclosure and Dispute Resolution Act.^{42/} The Act requests a proposal demonstrating the ability of utilities to use new and innovative communications equipment and services to further national goals concerning energy and the protection of public health and safety. The Act contemplates the use of spectrum for testing of new communications technologies by utilities to further these goals. UTC is confident that the testing to be performed pursuant to the Act will confirm the need for and viability of these types of systems. However, once these technologies are tested and found viable, spectrum will be required for their implementation. An allocation of non-commercial PCS spectrum would be ideal for implementation of these technologies.

Although utilities and other internal spectrum users may apply for commercial PCS licenses, this course of action would not be the most practical. Internal users would not require large spectrum blocks, nor would the geographic areas in which PCS could be licensed necessarily match the radio service area needs of internal users. As a result, internal users, such as utilities, would be licensed for more spectrum than they require, in larger geographic areas than they need. Creation of a non-commercial spectrum allocation would

^{42/} P.L. No. 102-556.

prevent this occurrence and would be a wise spectrum management practice.^{43/}

A two-tiered PCS structure such as described above would promote diverse PCS technical development and would be mutually beneficial to commercial and non-commercial PCS licensees, as well as to the public at large. In the first years of PCS licensing, while commercial PCS licensees concentrate on establishing generic PCS services, such as mobile telephone and mobile data service, non-commercial spectrum can serve as the "breeding ground" for new PCS concepts and technologies. In its August 1983 report entitled Future Private Land Mobile Telecommunications Requirements, the FCC noted that new technologies often initially have a slow rate of adoption by the consumer public, since consumers are uncertain about the benefits of the technology and because the initial price of new products is generally higher at their introduction.^{44/} During this introductory phase of PCS service, non-commercial licensees would be able to develop technological innovations for their

^{43/} In addition, if the FCC should allow for-profit lease of excess capacity on non-commercial systems, the FCC should limit the ability to do so for a number of years, so as to ensure non-commercial use of the systems. Similar restrictions were adopted in the 220 MHz licensing proceeding. Memorandum Opinion and Order, PR Docket No. 89-552, FCC 92-261, 57 Fed. Reg. 32448 (1992).

^{44/} See p. 4-3.

own internal use which would not be developed in the near term by commercial PCS services trying to establish consumer confidence in the most basic of PCS services. Once PCS service providers would be ready to offer more sophisticated versions of PCS service to the commercial sector, they would have a wide range of sophisticated service offerings from which to choose, already developed and tested in some format by non-commercial licensees.

The FCC has long recognized the ability of private radio systems to fund and promote innovations in spectrum technology that might otherwise not develop for a significant length of time. In its Report and Order outlining service rules for the narrowband use of the 220-222 MHz band, including the availability of both commercial and non-commercial nationwide licenses, the FCC specifically stated:

Commercial/non-commercial set asides will promote the widest variety of advanced narrowband development. Operators of commercial systems are best situated to develop and implement narrowband systems quickly, stimulated by profit motive. On the other hand, operators of large non-commercial systems are capable of producing technological advancements that carriers will not pursue because of a concern regarding market size or prior investments. The widely ranging needs of both commercial and non-commercial licensees will encourage experimentation and innovation. 6 FCC Rcd 2356, 2361 (1992).

Many of the goals stated by the FCC in support of its decision to license 900 MHz spectrum to SMR systems in the Public Safety, Industrial, and Land Transportation Radio

Services are applicable in the context of PCS. Common carriers had challenged the FCC's private radio service 900 MHz allocation, asserting that the services offered should be regulated on a common carrier basis. The FCC stated the new private radio services would stand as allocated because they would accomplish the following:

- (a) Foster the development and production of a wider range of models of the new and improved radio equipment needed for operation on 900 MHz frequencies. This is important because 900 MHz is a new and untried part of the spectrum as far as land mobile use is concerned, and a wide range of new equipment designs will be required to take advantage of, and to adjust to, the propagation characteristics and technical limitations [in] this spectrum.

- (d) Result in lower costs. Lower costs should come about through production of equipment and systems on a large scale and from the competitive forces of the market place. Also, a user will be able to negotiate and obtain only those facilities which he needs and thus avoid the additional costs inherent in standardized systems.
- (e) Be more responsive to the great variety of needs and requirements in the [new] service.
- (f) Provide the flexibility needed [...] so that an individual user will be able to arrange or negotiate for the specific communication facility that will fit uniquely his particular requirement.
- (g) Enhance the development of new communication techniques. [T]his will not only benefit the users, but it will lead to more efficient spectrum utilization.^{45/}

^{45/} Memorandum Opinion and Order in Docket No. 18262, 51 FCC 2d 945, 969-70 (1975); Order (on further reconsideration), FCC 78-854 (1978); aff'd sub nom. NARUC v. (continued...)

A non-commercial PCS allocation could achieve the same necessary goals for the PCS service. Further, non-commercial, internal users of PCS spectrum would provide equipment manufacturers with a ready and diverse market for "testing" their technical innovations. Similarly, the communications needs of the internal licensees would prompt development of the additional innovative equipment to meet those needs.

As indicated by the fact that a significant number of requests for new spectrum were filed for new technologies, and that the FCC initiated a proceeding to establish a "spectrum reserve" to accommodate these requests, many applications of new technology PCS services are possible.^{46/} U.S. manufacturers should be able to take the lead in manufacturing both standard and advanced PCS equipment. Motorola, Inc. has officially stated that 150 MHz of private PCS spectrum will be required and outlined the benefits of a private allocation.^{47/} The availability of non-commercial

^{45/} (...continued)
FCC, 525 F.2d 630 (D.C. Cir. 1976), cert. denied, 425 U.S. 992 (1976).

^{46/} Notice of Proposed Rule Making in ET Docket No. 92-9, 7 FCC Rcd 1542 (1992).

^{47/} The following is an excerpt from the Executive Summary of a presentation by John E. Major of Motorola, Inc. during the FCC's PCS en banc hearing, held December 5, 1991:

(continued...)

spectrum for multiple, complex internal use systems in addition to commercial licensing would encourage maximum development. In addition, the likelihood of the development by non-commercial systems of sophisticated PCS systems for internal use may provide a competitive incentive for commercial PCS systems to implement technical innovations more quickly, to the public benefit.

^{47/}(...continued)

Private radio, used by public safety, utilities, oil companies, and railroads to name a few key players, is an area where the U.S. has historically led, and as a result, today enjoys the benefits of world class systems as well as substantial exports. Private radio is a proven area of U.S. technological innovation. A mix of services will better meet the broad range of user needs and provide competitive alternatives that drive each service to deliver the best possible solution at the lowest cost to the user. Looking forward, private PCS will offer a variety of wide area and on-site systems, all capable of using voice, data, and imaging, and all capable of tapping into a public PCS network.

Private users have separate, distinct communication needs not met by standardized or generic public systems. Private users need customized coverage areas, faster channel access, and the capability to dynamically reconfigure group communications. In addition, public system airtime charges would be prohibitively expensive for large volume private users. Similarly, we have seen customized private alternatives develop in the wireline world to meet user needs. These private wireline alternatives provide competition that drive down service costs and greatly expand the services available. For business, industrial, and governmental entities, this new wireless era offers the promise of advanced systems to improve responsiveness and productivity. The full potential of PCS, however, can only be realized if the Commission makes adequate spectrum available for private, both individual and shared, as well as public systems.

IV. SPECIFIC ALLOCATION PROPOSALS

In light of the comments received by the FCC in response to the NPRM, UTC revises its specific allocation proposals for PCS.^{48/} UTC increases the amount of spectrum it requests for a non-commercial allocation from 20 MHz to 40 MHz and requests that the FCC license only two commercial PCS users on spectrum blocks of 40 MHz each. Since there was not strong support among the local exchange carriers for access to a 10 MHz block of PCS spectrum,^{49/} UTC withdraws its limited support for this proposal. UTC concurs with a 20 MHz allocation for unlicensed devices, but reiterates its request that the FCC proceed cautiously in allocating shared spectrum for unlicensed PCS devices.^{50/} Thus, UTC requests that the FCC allocate a total of 140 MHz of spectrum: 40 MHz for a non-commercial allocation and 80 MHz for commercial PCS use. The remaining 20 MHz would be allocated for unlicensed PCS use.

^{48/} UTC originally proposed licensing of at least three commercial providers for spectrum allocations of up to 30 MHz, in addition to a separate non-commercial allocation of 20 MHz.

^{49/} See e.g., Ameritech, NYNEX Corporation, GTE Corporation, US WEST, INC. and Pacific Telesis Group.

^{50/} UTC, p. 29.

A. Non-Commercial Allocation Should Be 40 MHz

Due to the many benefits outlined above inherent in a non-commercial allocation, UTC requests a non-commercial allocation of 40 MHz for what would essentially amount to a non-commercial reserve. The 40 MHz allocation would ensure there is sufficient spectrum available for non-commercial users. After a set amount of time, and depending upon how PCS develops, the FCC might want to consider whether to permit licensed commercial PCS operators to apply for unused portions of the non-commercial reserve, either for new systems or to expand existing systems. The temporary nature of a non-commercial reserve would allow the FCC to provide for non-commercial development of PCS applications without prejudice to commercial systems.

As stated in UTC's comments, non-commercial applicants should be permitted to apply for the specific amount of spectrum they require, in the specific areas needed, without a formal structure for spectrum allocation or established geographic divisions.^{51/} Non-commercial licensees would also be subject to the identical transition rules with respect to existing microwave licensees in the band, as are established for commercial PCS licensees.

^{51/} UTC, p. 25.

UTC notes that City Utilities requests the FCC to set aside 10 MHz of spectrum in the 2 GHz band for utility PCS use for a limited time.^{52/} UTC supports the establishment of this 10 MHz set-aside as a subset of the non-commercial reserve. The establishment of such a utility set-aside is consistent with the FCC's past allocation of a utility set-aside of 900 MHz multiple address system spectrum.^{53/} UTC suggests that the FCC sunset the utility PCS spectrum set-aside, or allow interpool sharing, only after at least ten years.^{54/}

B. Commercial Allocations Should Be 40 MHz

UTC proposes that the FCC evenly divide the remaining 80 MHz of commercial spectrum into two 40 MHz allocations.^{55/} As PCN America and Cox Enterprises, Inc., note, a 40 MHz allocation would be more workable with existing fixed

^{52/} City Utilities, p. 12.

^{53/} See, e.g., Report and Order, PR Docket No. 87-5, 3 FCC Rcd 1564 (1988).

^{54/} This would be consistent with the FCC's exclusive utility set-aside for 900 MHz MAS, which was effectively for 11 years. See Report and Order, in SS Docket No. 79-18, 48 RR 2d 1183 (1981), and Report and Order in PR Docket No. 87-5, 3 FCC Rcd 1564 (1988). In the present situation, a longer set-aside would be justified because the technology for PCS is only in its infancy.

^{55/} Other commenters requesting 40 MHz per PCS license include Interdigital Communications, Corp., MCI, American Personal Communications, PCN America, Cox Enterprises, Inc., Comsearch, Pertel Inc., Omnipoint Communications, Inc. and Time Warner Telecommunications.

microwave channelization^{56/} than the allocations of up to 30 MHz previously supported by UTC,^{57/} since they more closely match the 10 MHz assignment structure of most existing microwave licensees.^{58/} Should the FCC decide to allocate PCS spectrum in smaller blocks, UTC requests that the total licensed commercial PCS allocation not exceed 80 MHz, so as to allow a non-commercial allocation of 40 MHz.

C. Number of Commercial Service Providers

UTC proposes the FCC limit the number of PCS service providers permitted in this initial licensing process to two per geographic area.^{59/} UTC concurs with the assessment of American Personal Communications that, in addition to competition from another PCS licensee, each PCS licensee will face competition from two cellular providers and one SMR service.^{60/} PCN America posits that competition to PCS providers will exist from an even greater number of competing

^{56/} PCN America, p. 4.

^{57/} UTC, p. 27.

^{58/} Cox Enterprises, Inc., p. 9.

^{59/} Should the FCC determine to license PCS service providers on a nationwide basis, the nationwide licensee should be counted as one of the two licensees permitted. Other commenters supporting the two-licensee limit are: American Personal Communications, Tel/Logic Inc., PCN America, PerTel Inc., Omnipoint Communications, Inc. and Time Warner Telecommunications.

^{60/} American Personal Communications, p. 14.

service providers.^{61/} UTC concurs with PCN America that provision for two PCS licensees would increase the likelihood that PCS operators will remain financially sound.^{62/} As calculated by American Personal Communications, a PCS licensee could not expect even a long-term positive cash flow if more than three licenses are issued.^{63/}

UTC cautions the FCC to consider the overall competitive marketplace for mobile communications services in its determination of the number of PCS service providers to be licensed. Given the strong presence of competition to PCS service from other service providers in the mobile communications market, UTC suggests the FCC take a conservative stance on the number of PCS licensees and initially to permit only two commercial PCS licensees per geographic area.^{64/} Licensing of more than two PCS

^{61/} PCN America, p. 5.

^{62/} PCN America, p. 6.

^{63/} American Personal Communications, p. 16.

^{64/} UTC notes that, should the mobile services market indicate that additional PCS licensees are necessary and could prove viable, the FCC would not be foreclosed from allocating spectrum for additional PCS service providers. UTC suggests the FCC allocate less PCS providers initially, rather than allocating too many PCS providers initially and having to reallocate unused PCS spectrum at a later date.

Should the FCC determine to license more than two licensees per geographic area, UTC requests that these licensees be allocated no more than a total of 80 MHz of spectrum.

providers would dilute the effectiveness of any single provider and defeat the viability of this promising new service. Limited initial licensing would not foreclose opportunities for the optimum development and deployment of PCS technology because the non-commercial allocation proposed by UTC would provide countless opportunities for equipment manufacturers to research and refine diverse and more sophisticated technological applications of PCS, for later rollover to the public sector. Thus, the FCC's goal of diversity of services would be achieved.^{65/}

Limiting the number of commercial PCS service providers to two also would further the FCC's goal of speed of deployment of PCS service to the public, since efforts to bring the service to fruition would be focused on fewer potential service providers and not spread out in confusion among a multiplicity of candidate services. It is important to note that each PCS provider must coordinate with equipment manufacturers for PCS equipment and for transition for existing microwave users to alternate communications facilities, as well as with other players in the communications infrastructure such as the public switched telephone network, cable companies and owners of locations for potential PCS cell sites. The volume of coordination to

^{65/} NPRM, at p. 4.

be achieved by a single PCS provider is overwhelming. If this process is multiplied two, three, four or even five times, the result would be nothing short of chaotic and would hinder, rather than promote, the FCC's goals for PCS development.

D. Geographic Areas To Be Licensed

Although UTC opposed nationwide licensing in its comments as a disruption of the competitive PCS balance and a threat to the rapid implementation of service,^{66/} UTC clarifies that it is not opposed to adoption of MCI's proposal for licensing of national consortia.^{67/} MCI proposes that a national consortium would be composed of a major participant and a group of independent local operators with substantial ownership interests and management responsibilities.^{68/} The consortium would set national specifications for PCS equipment and system design, and would require local operators to offer a uniform package of basic services.^{69/} Long distance access and roaming capability would be available.^{70/} This proposal, while involving

^{66/} UTC, p. 32.

^{67/} MCI, pp. 9-10.

^{68/} MCI, p. 9.

^{69/} MCI, p. 10.

^{70/} MCI, p. 10.

"nationwide" licensing, would still fulfill the goal of allowing multiple service providers to obtain spectrum for service areas which match their needs, resulting in efficient spectrum use. UTC reiterates, however, that regardless of the specific geographic division of spectrum allocations, the total amount of commercial spectrum licensed should not exceed 80 MHz.

V. PCS SHOULD BE REGULATED ON A PRIVATE CARRIER BASIS

A number of commenters supported a regulatory licensing status for PCS under which the individual licensees could determine whether to provide service on a private or common carrier basis. Telocator, one of the primary advocates of this dual approach, refers to it as a "flexible service concept."^{21/} UTC would support such an approach provided that any PCS spectrum reserved for non-commercial use is regulated on a purely private or private carrier basis. Non-commercial PCS service would primarily serve the internal communications requirements of specific industries and thus should not be constrained by the limits of common carrier regulation.^{22/}

^{21/} Telocator, p. 13.

^{22/} As discussed in Section III of these Reply Comments, however, non-commercial PCS spectrum should be used for private carrier service only if certain benchmarks are met with respect to private internal use.

Finally, irrespective of whether PCS is regulated on a private or common carrier basis, PCS licensees should have a federally protected right of interconnection to the public switched telephone network at a point of their own choosing. As UTC noted in its comments, interconnection rights are the only method whereby the FCC can guarantee that PCS systems will be able to develop to their fullest potential as communications networks.

VI. CONCLUSION

UTC continues to maintain that the FCC must not allow the development of PCS at the expense of existing users of the 2 GHz band and the public which they serve. UTC reiterates its belief that a fundamental element in this proceeding is the adoption of technical interference standards between PCS service providers and incumbent 2 GHz microwave users. Thus, at a minimum, utilities and other existing 2 GHz private microwave users must be assured interference protection equal to or better than the current level of protection.

Commenters echo UTC's position that the Commission's proposed interference calculations are in no way overly conservative. There is further agreement that since the operating parameters of PCS systems, as well as system architectures, are still undefined, the protection criteria

for fixed microwave systems should be set, at least initially, to eliminate any doubt that microwave systems will be adequately protected.

There is nearly universal agreement among the commenters that it will not be possible to share the 1910-1930 MHz portion of the 2 GHz band between unlicensed PCS and existing 2 GHz microwave licensees. Accordingly, the Commission must not authorize PCS to operate in the 1910-1930 MHz band on an unlicensed basis until after a mechanism is developed whereby: (1) all microwave users are relocated from the band; and (2) the expense of such relocation is borne in full by the manufacturers/vendors of unlicensed PCS equipment.

UTC firmly believes that the development of "commercial" PCS to meet the communications needs of the general public is a worthy goal. Moreover, UTC perceives a strong need for a separate PCS spectrum allocation to meet the internal communications needs of utilities and other core industries.

Accordingly, UTC reiterates its request for a non-commercial PCS allocation. A non-commercial allocation will ensure there is sufficient, guaranteed spectrum for the development of innovative and specialized PCS applications by private spectrum users. Once refined, the more innovative and complex PCS applications developed by non-commercial

users would be adaptable for more general, large-scale distribution to the public.

Due to the many benefits inherent in a non-commercial allocation, UTC requests a non-commercial allocation of 40 MHz, for what would essentially amount to a non-commercial reserve. After a set amount of time, and depending upon how PCS develops, the FCC could consider whether to permit licensed commercial PCS operators to apply for unused portions of the non-commercial reserve, either for new systems, or to expand existing systems.

UTC proposes that the FCC evenly divide the remaining 80 MHz of commercial spectrum into two 40 MHz allocations, and that the Commission limit the number of commercial PCS service providers permitted in this initial licensing process to two per geographic area.

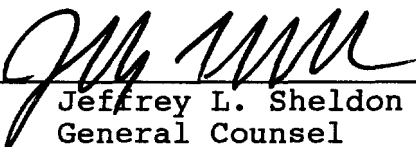
Although UTC opposed nationwide licensing in its comments as a disruption of the competitive PCS balance and a threat to the rapid implementation of service, UTC clarifies that it is not opposed to adoption of a proposal for licensing of national consortia composed of a major participant and a group of independent local operators with substantial ownership interests and management responsibilities.

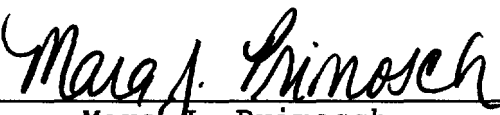
Finally, UTC supports a regulatory licensing status for PCS under which the individual licensees could determine whether to offer service on a private or common carrier basis, provided that any PCS spectrum reserved for non-commercial use is regulated on a purely private or private carrier basis.

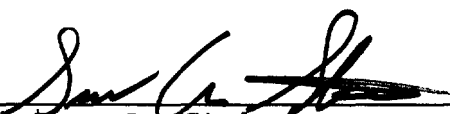
WHEREFORE, THE PREMISES CONSIDERED, the Utilities Telecommunications Council respectfully requests the Federal Communications Commission to take action consistent with the views expressed herein.

Respectfully submitted,

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